

MODULE HANDBOOK

Module Name:	Elementary Number Theory
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	3/ Second year
Module Coordinator(s):	Dwi Nur Yunianti, M.Sc
Lecturer(s):	Dr. R. Sulaiman, M.Si Dwi Nur Yunianti, M.Sc Rudianto Artiono, M.Si
Language:	Indonesia
Classification within the curriculum:	Compulsory course/ elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 2 x 170 minutes = 340 minutes = 5.6 hours lectures
Workload:	15 weeks per semester consisting of: <ul style="list-style-type: none"> ➤ 2 hours lectures (2 x 50 minutes) per week, ➤ 2 hours tutorial assignments (2 x 60 minutes) per week, ➤ 2 hours individual study (2 x 60 minutes) per week, Total workload : 14x2x170 minutes = 4,760 minutes = 3.17 ECTS*
Credit Point:	2
Requirements:	Foundation of Mathetatics
Learning Goals:	<p>Knowledge</p> <p>CLO-1: Identify and explain solving simple problems using the concepts and properties of division, number base, prime numbers, FPB and KPK, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, congruence system linear</p> <p>CLO-2: Capable of thinking in a structured manner, reasoning, proving simply the characteristics of division, number base, prime numbers, FPB and KPK, congruence, residual system, Euler's theorem, linear congruence,</p>

	<p>simultaneous linear congruence system, linear congruence system.</p> <p>Skill</p> <p>CLO-3: Use the concepts and properties of division, number base, prime numbers, FPB and KPK, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, linear congruence system in solving more general mathematical problems.</p>																														
Content:	Divisible, number base, prime numbers, FPB and LCM, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, linear congruence system.																														
Study/exam achievements	<ul style="list-style-type: none"> ➤ Students are considered competent and pass if the final score calculated from the score of midterm exam, assignments, participation, and final exam is at least 55 or C. ➤ Final score is calculated as follows: ➤ 20% midterm exam + 30% assignments + 20% participation + 30% final exam ➤ Final index is defined as follow: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Index</th> <th>Converted Score</th> <th>Score Range</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>4.00</td> <td>$85 \leq A \leq 100$</td> </tr> <tr> <td>A-</td> <td>3.75</td> <td>$80 \leq A- < 85$</td> </tr> <tr> <td>B+</td> <td>3.50</td> <td>$75 \leq B+ < 80$</td> </tr> <tr> <td>B</td> <td>3.00</td> <td>$70 \leq B < 75$</td> </tr> <tr> <td>B-</td> <td>2.75</td> <td>$65 \leq B- < 70$</td> </tr> <tr> <td>C+</td> <td>2.50</td> <td>$60 \leq C+ < 65$</td> </tr> <tr> <td>C</td> <td>2.00</td> <td>$55 \leq C < 60$</td> </tr> <tr> <td>D</td> <td>1.00</td> <td>$40 \leq D < 55$</td> </tr> <tr> <td>E</td> <td>0.00</td> <td>$0 \leq E < 40$</td> </tr> </tbody> </table>	Index	Converted Score	Score Range	A	4.00	$85 \leq A \leq 100$	A-	3.75	$80 \leq A- < 85$	B+	3.50	$75 \leq B+ < 80$	B	3.00	$70 \leq B < 75$	B-	2.75	$65 \leq B- < 70$	C+	2.50	$60 \leq C+ < 65$	C	2.00	$55 \leq C < 60$	D	1.00	$40 \leq D < 55$	E	0.00	$0 \leq E < 40$
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Forms of Media	Slides and LCD projectors, whiteboard																														
Literature	<p>[1] Rosen, K. H. 2018. Elementary Number Theory and its Application (6th edition). New York: Addison – Wesley Publishing Company.</p> <p>[2] Sukirman. 2005. Pengantar Teori Bilangan. Yogyakarta: Hanggar Kreator Yogyakarta</p> <p>[3] Niven, Ivan, Herbert S. Zuckerman, Hugh L. Montgomery. 1991. An Introduction to The Theory of Numbers. Canada. John Wiley & Sons, Inc</p>																														

Note

*Total hours per 1 credit in 1 semester= $\{(1 \text{ credit} \times 170 \text{ minutes} \times 14 \text{ weeks}) / 60 \text{ minutes}\} = 39,67 \text{ hours}$.
Each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1,59 ECTS.